

CLAIMS

1. A computer-assisted system for the production of training/learning programs (20) for individuals or groups of individuals of an enterprise, with a view to the individuals(s) achieving learning outcomes by implementing learning objects (LO), the system comprising:

a database of normalised LO parameters (14) wherein LO's are described in the framework of a normalised description;

a database of normalised LO outcomes (15) wherein LO outcomes are described in the framework of a normalised description;

a database of learning outcome parameters (18) described in the framework of a normalised description corresponding to that of the normalised LO outcomes (15);

a curricula generation module (F) receiving normalised learning outcome parameters (18) and normalised LO parameters (14), selectable into different combinations thereof for producing a set of alternate learning curricula (19), each curriculum comprising a set of learning objects for the individual(s) to reach a set of outcomes; and

a curriculum selection module (G) receiving curricula (19) from the outcome optimization module (F) and said normalised LO outcomes (15), the curriculum selection module (G) being arranged to provide an interactive indicia of the match to requirements of any given learning curriculum, selectable by choice of LO's corresponding to the normalised LO outcome(s) (15) and learning outcomes corresponding to the learning outcome parameters (18), to assist ranking the curricula for selection of a training/learning plan (20).

2. The system of claim 1 comprising a learning object analysis and description standardisation

- 27 -

unit (A,B) which contains a database of LO parameter models and comprises means (10,12) for inputting LO parameters, means for comparing input LO parameters with the LO parameter models, and which is arranged to assist, prompt or effect the conversion of input LO parameters into normalised LO parameters (14) and normalised LO outcomes (15) manually, semi-manually or automatically.

3. The system of claim 1 or 2, comprising an outcome standardisation unit comprising an outcomes thesaurus database (13) associated with an outcome standardisation module (C) having an input for enterprise outcome parameters (16), the outcomes thesaurus database (13) containing a set of normalised outcome names, synonyms and descriptions, the outcome standardisation module (C) being arranged to compare input enterprise outcome parameters (16) with standardised outcomes from the outcomes thesaurus database (13) and being associated with an outcome verification module (D), the modules C and D being arranged to assist, prompt or effect the conversion of input enterprise outcome parameters (16) into standardised/verified enterprise outcome parameters (18).

4. The system of claim 3, wherein the outcome standardisation unit is arranged to:

(a) match input enterprise outcome parameters (16) with normalised outcomes stored in the outcomes thesaurus database (13) when the enterprise outcome parameters are expressed in the same or similar language to stored normalised outcomes; and

(b) when the input enterprise outcome parameters (16) are expressed in words that are different to stored normalised outcomes, convert these words into synonyms thereof that are stored in the outcomes thesaurus database (13), match with normalised outcomes stored in the outcomes thesaurus database (13) and,

(c) then, if there is a failure to match with normalised outcomes stored in the outcomes thesaurus

database (13), provide for a verification to complete the outcome standardisation.

5 5. The system of claim 4, wherein if there is a mismatch of a partly standardised outcome whereof some words are replaced by synonyms, the outcome standardisation unit is arranged for verification that said partly standardised outcome is grammatically and lexically correct to produce a verified outcome proposable as an addition to the outcomes thesaurus database (13).

10 6. The system of claim 3, 4 or 5, wherein the outcome standardisation unit further comprises a database of standard curricula (17) providing an additional input for the outcome standardisation module (C).

15 7. The system of any one of claims 3 to 6, wherein the outcomes thesaurus (13) provides input to an LO description normalization module (B) for producing normalised LO outcomes (15).

20 8. The system of any preceding claim, further comprising means (E) for inputting to the curriculum selection module (G) normalised enterprise parameters (21) that indicate values an enterprise attributes to the normalised LO outcomes (15).

25 9. The system of any preceding claim, further comprising a monitoring module (H) for comparing parameters contained in a selected plan with updated parameters input by the user as the plan is implemented, and producing progress reports and a new plan if needed.

30 10. A computer-assisted system for the production of training/learning programs for individuals or groups of individuals of an enterprise, with a view to the individuals(s) achieving learning outcomes by implementing learning objects (LO), the system comprising:

35 a learning object analysis and description standardisation unit (A,B) which comprises a database of normalised LO parameters (14) including LO parameter models wherein LO's are described in the framework of a

normalised description, a database of normalised LO outcomes (15) wherein LO outcomes are described in the framework of a normalised description, means (10,12) for inputting LO parameters, means for comparing input LO parameters with the LO parameter models, and which is arranged to assist, prompt or effect the conversion of input LO parameters into normalised LO parameters (14) and normalised LO outcomes (15) manually, semi-manually or automatically;

an outcome standardisation unit (OS) comprising an outcomes thesaurus database (13) associated with an outcome standardisation module (C) having an input for enterprise outcome parameters (16), the outcomes thesaurus database (13) containing a set of normalised outcome names, synonyms and descriptions, the outcome standardisation module (C) being arranged to compare input enterprise outcome parameters (16) with standardised outcomes from the outcomes thesaurus database (13) and being associated with an outcome verification module (D), the modules C and D being arranged to assist, prompt or effect the conversion of input enterprise outcome parameters (16) into standardised/verified enterprise outcome parameters (18);

an outcome optimization module (F) receiving standardised/verified enterprise outcome parameters (18) from the outcome verification module (D) and normalised LO parameters (14) from the LO unit, selectable manually, semi-manually or automatically into different combinations thereof to produce a set of alternate learning curricula (19); and

a curriculum selection module (G) receiving curricula (19) from the outcome optimization module (F), normalised LO outcomes (15) from the LO unit (A,B), and normalised enterprise parameters (21) that indicate values an enterprise attributes to the normalised LO outcomes (15), said module providing an interactive indicia of the match to requirements of any given learning curriculum, selectable by choice of the normalised LO outcome(s) (15)

and the verified enterprise outcome(s) (18) for ranking the curricula to select a training/learning plan.

11. A method for computer-assisted production of a training/learning program for an individual or a group of individuals of an enterprise, with a view to the individuals(s) achieving learning outcomes by implementing learning objects (LO), using the system of any preceding claim, the method comprising:

adding or subtracting learning objects from the normalised LO outcomes (15) and adding or subtracting enterprise outcomes (18) in the curriculum selection module to establish different curricula; ranking the curricula; and selecting a training/learning plan (20).

12. A method of standardizing enterprise outcome parameters using the outcome standardisation unit of a system according to claim 3, or any one of claims 4 to 9 when dependent on claim 3, or claim 10, comprising:

(i) inputting enterprise outcome parameters (16) into the enterprise outcome standardisation module (C);

(ii) matching the input enterprise outcome parameters (16) with normalised outcomes stored in the outcomes thesaurus database (13) when the enterprise outcome parameters are expressed in the same or similar language to stored normalised outcomes;

(iii) when the input enterprise outcome parameters (16) are expressed in words that are different to stored normalised outcomes, converting these words into synonyms thereof that are stored in the outcomes thesaurus database (13), then matching with normalised outcomes stored in the outcomes thesaurus database (13) and

(iv) then, if there is a failure to match with normalised outcomes stored in the outcomes thesaurus database (13), effecting a verification to complete the outcome standardisation.

13. The method of claim 12, wherein if there is a mismatch of a partly standardised outcome whereof some words are replaced by synonyms, said partly standardised outcome is verified to produce a verified outcome which is proposed as an addition to the outcomes thesaurus database (13).

14. A method for computer-assisted production of training/learning programs for individuals or groups of individuals of an enterprise, with a view to the individuals(s) achieving learning outcomes by implementing learning objects (LO), the method comprising:

providing a database of normalised LO parameters (14) wherein LO's are described in the framework of a normalised description, a database of normalised LO outcomes (15) wherein LO outcomes are described in the framework of a normalised description, and a database of learning outcome parameters (18) described in the framework of a normalised description corresponding to that of the normalised LO outcomes (15);

supplying normalised learning outcome parameters (18) and normalised LO parameters (14) to a curricula generation module (F) and selecting different combinations thereof to producing a set of alternate learning curricula (19), each curriculum comprising a set of learning objects for the individual(s) to reach a set of outcomes; and

providing an interactive indicia of the match to requirements of any given learning curriculum by choosing LO's corresponding to the normalised LO outcome(s) (18) and learning outcomes corresponding to the learning outcome parameters (18), ranking the curricula and selecting a training/learning plan (20).

15. A method for computer-assisted production of training/learning programs for individuals or groups of individuals of an enterprise, with a view to the individuals(s) achieving learning outcomes by implementing learning objects (LO), the method comprising:

providing a learning object analysis and description standardisation unit (A,B) which comprises a database of normalised LO parameters (14) wherein LO's are described in the framework of a normalised description, a database of normalised LO outcomes (15) wherein LO outcomes are described in the framework of a normalised description, inputting LO parameters (10,12), comparing input LO parameters with a LO parameter model, and assisting, prompting or effecting the conversion of input LO parameters into normalised LO parameters (14) and normalised LO outcomes (15) manually, semi-manually or automatically;

providing an outcome standardisation unit comprising an outcomes thesaurus database (13) associated with an outcome standardisation module (C) having an input for enterprise outcome parameters (16), the outcomes thesaurus database (13) containing a set of normalised outcome names, synonyms and descriptions, the outcome standardisation module (C) comparing input enterprise outcome parameters (16) with standardised outcomes from the outcomes thesaurus database (13) to provide standardised enterprise outcome parameters, verifying the standardised enterprise outcome parameters, and assisting prompting or effecting the conversion of input enterprise outcome parameters (16) into standardised/verified enterprise outcome parameters (18);

providing an outcome optimization module (F) receiving standardised/verified enterprise outcome parameters (18) from the outcome verification module (D) and normalised LO parameters (14) from the LO unit, and selecting standardised/verified enterprise outcome parameters (18) and normalised LO parameters (14) manually, semi-manually or automatically into different combinations thereof to produce a set of alternate learning curricula (19); and

selecting a training/learning plan by receiving curricula (19) from the outcome optimization module (F), normalised LO outcomes (15) from the LO unit, and normalised enterprise parameters (21) that indicate values

an enterprise attributes to the normalised LO outcomes (15), and providing an interactive indicia of the match to requirements of any given learning curriculum by choice of the normalised LO outcome(s) (15) and the verified
5 enterprise outcome(s) (18) to rank the curricula and thereby select a training/learning plan.